PBG

THE PEPSI BOTTLING GROUP

PROJECT REPORT

Soil Testing for Lead & Arsenic

Plastic Bottle Line Project
Stormwater Pond
Area 7

Project Location:

Pepsi Bottling Group
3801 Brighton Blvd.
Denver, CO 80216

Prepared by:

Gary E. Johnson
Transportation & Industrial
Services, Inc.
3772 Puritan Way, Unit #4
Erie, CO 80516

Report Date:

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1.0 Project Background

In order to obtain information on possible lead and arsenic in soils at the Pepsi Bottling Group facility located at 3801 Brighton Blvd., Denver, Colorado 80216, soil samples were collected from Area 7 of the Plastic Bottle Line Project prior to construction activities that will involve disturbing the soil. Area 7 consists of a Stormwater Detention Pond to be constructed in the back lot of the bottling plant in the former baseball field adjacent to Arkins Court on the North side of the Pepsi property. The sampling project was conducted by Gary E. Johnson of Transportation & Industrial Services, Inc., 3772 Puritan Way, Unit # 4, Erie, Colorado 80516 on October 15, 2001 and October 17, 2001.

2.0 Sampling Locations

Currently Area 7 is covered with grass. The Stormwater Pond will be approximately 90 feet wide by 250 feet long (.67 acres). The boring locations were selected randomly using a random number generator to select x and y coordinates within 10 equal sized sections (45 feet by 50 feet) of Area 7. Below is Table 1, which lists the coordinates (in feet) for each boring location within the sections of Area 7. The coordinates in each section were measured from the southwest corner of each section designated as (x,y) = 0,0.

Table 1.
Randomly Selected Coordinates -Area 7

Area 7 Section	X Coordinate	Y Coordinate
A7-1	40	17
A7-2	38	24
A7-3	13	35
A7-4	28	13
A7-5	07	33
A7-6	43	20
A7-7	13	26
A7-8	22	34
A7-9	43	22
A7-10	30	05

One composite soil sample was collected from each of the 10 soil borings from a depth of 0'-6' feet below ground surface (bgs), which is the maximum depth that will be disturbed in excavating the detention pond. Additional samples were collected from 5 of the borings (A7-5, A7-10, A7-8, A7-6, and A7-1) and submitted for SPLP analysis in order to provide Shepherd-Miller Consultants information to assist Pepsi Bottling Group in evaluating the need to line the pond. Three composite samples were collected from each of these borings

at various depths and submitted for SPLP analysis. Refer to the Sample Location Map attached to this report for a representation of the sample locations in Area 7.

3.0 Sampling Procedure

On October 15, 2001 soil samples were collected using hollow stem auger drilling rig provided by Site Services, Inc., 15097 W. 44th Ave., Suite 2, Golden Colorado 80403. Four-inch augers were utilized to drill to the desired depth. Then a California drive sampling tube was used to collect the samples from the desired depths through the hollow auger stem. Brass sampling sleeves were used to retrieve the samples from each boring. The SPLP samples were also collected in the same manner but to a greater depth in these borings. The depth and sample locations are listed in Table 4. below.

The soil removed from the brass sleeves was placed in a stainless steel bowl and thoroughly mixed with a stainless steel spoon. Three sterile 4-ounce sample jars were filled with soil from the bowl for each sample, and the remaining soil was placed back into the boring. This procedure was repeated for each boring, thus yielding 5 composite soil samples for analysis from Area 7 representing the depth from 0' to 6' bgs. These samples were designated A7-5, A7-10, A7-8, A7-6, and A7-1.

The 5 remaining composite samples (A7-7, A7-2, A7-3, A7-4, and A7-9) were collected using a Geoprobe hydraulic push drilling rig on October 17, 2001. Stainless steel drive tubes were advanced through the soil at each boring location to the desired depth. New clear plastic sampling sleeves were used to retrieve the samples from each boring. The soil removed from the plastic sleeve samples was placed in a stainless steel bowl and thoroughly mixed with a stainless steel spoon. Three sterile 4-ounce sample jars were filled with soil from the bowl for each sample, and the remaining soil was placed back into the boring. This procedure was repeated for each boring, thus yielding an additional 5 composite soil samples for a total of 10 (from 0' to 6' bgs) for analysis representing soil that will be disturbed when excavating the storm water detention pond.

The stainless steel augers and hollow stem sampler, drive tubes, bowl, and spoon were decontaminated between each sample collection to prevent cross contamination between samples. These items were scrubbed in an Alconox ™ detergent and distilled water solution and then triple-rinsed with distilled water and dried with clean paper towels before being utilized for the next boring.

A chain-of-custody was completed and the sample jars were labeled, sealed, and placed in a cooler on ice for transportation to the laboratory. The samples were analyzed by Evergreen Analytical, Inc. located at 4036 Youngfield St. in Wheat Ridge, Colorado 80033. Each composite sample collected from 0' to 6' bgs was submitted for Total Lead and Total Arsenic analysis by EPA Method SW6020A. As previously mentioned, 15 samples were also submitted to Evergreen Analytical, Inc. for SPLP analysis. The chain-of-custody and the laboratory reports are included as an attachment to this report.

4.0 Description of Soil Samples

Below are physical descriptions of the soil samples collected from o' to 6' bgs in the location of the proposed Stormwater detention pond.

Table 2.
Soil Description of Samples –Area 7

Sample ID	Soil Description
A7-1	Red brown gravelly sand, poorly sorted with pebbles to 1" diameter and small pieces of red brick to ½" diameter
A7-2	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-3	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-4	Red brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-5	Red brown gravelly sand, poorly sorted with pebbles to 1" diameter and small pieces of red brick to ½" diameter
A7-6	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-7	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-8	Red brown gravelly sand, poorly sorted with pebbles to 1/2" diameter and small pieces of red brick to ½" diameter
A7-9	Red brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter
A7-10	Red brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to ½" diameter

5.0 Totals Analytical Results

Below is a table listing the 0' 6' analytical results of the samples collected from Area 7.

Table 3.
Pb and As Analytical Results -Area 7

Sample ID	Date Collected	Time Collected	Depth Collected bgs	Total Arsenic Results (in mg/Kg)	Total Lead Results (in mg/Kg)
A7-1	10/15/01	1410	0'-6'	73	560
A7-2	10/17/01	0822	0'-6'	9.5	130
A7-3	10/17/01	0850	0'-6'	U	33
A7-4	10/17/01	0920	0'-6'	7.7	39
A7-5	10/15/01	0820	0'-6'	U	71
A7-6	10/15/01	1115	0'-6'	24	240
A7-7	10/17/01	0810	0'-6'	12	85
A7-8	10/15/01	1020	0'-6'	8	61
A7-9	10/17/01	0945	0'-6'	8	120
A7-10	10/15/01	0930	0'-6'	12	200

Note: U = not detected at the reporting limit

The chain-of-custodies and the laboratory reports for these totals analyses are included as an attachment to this report.

6.0 SPLP Analytical Results

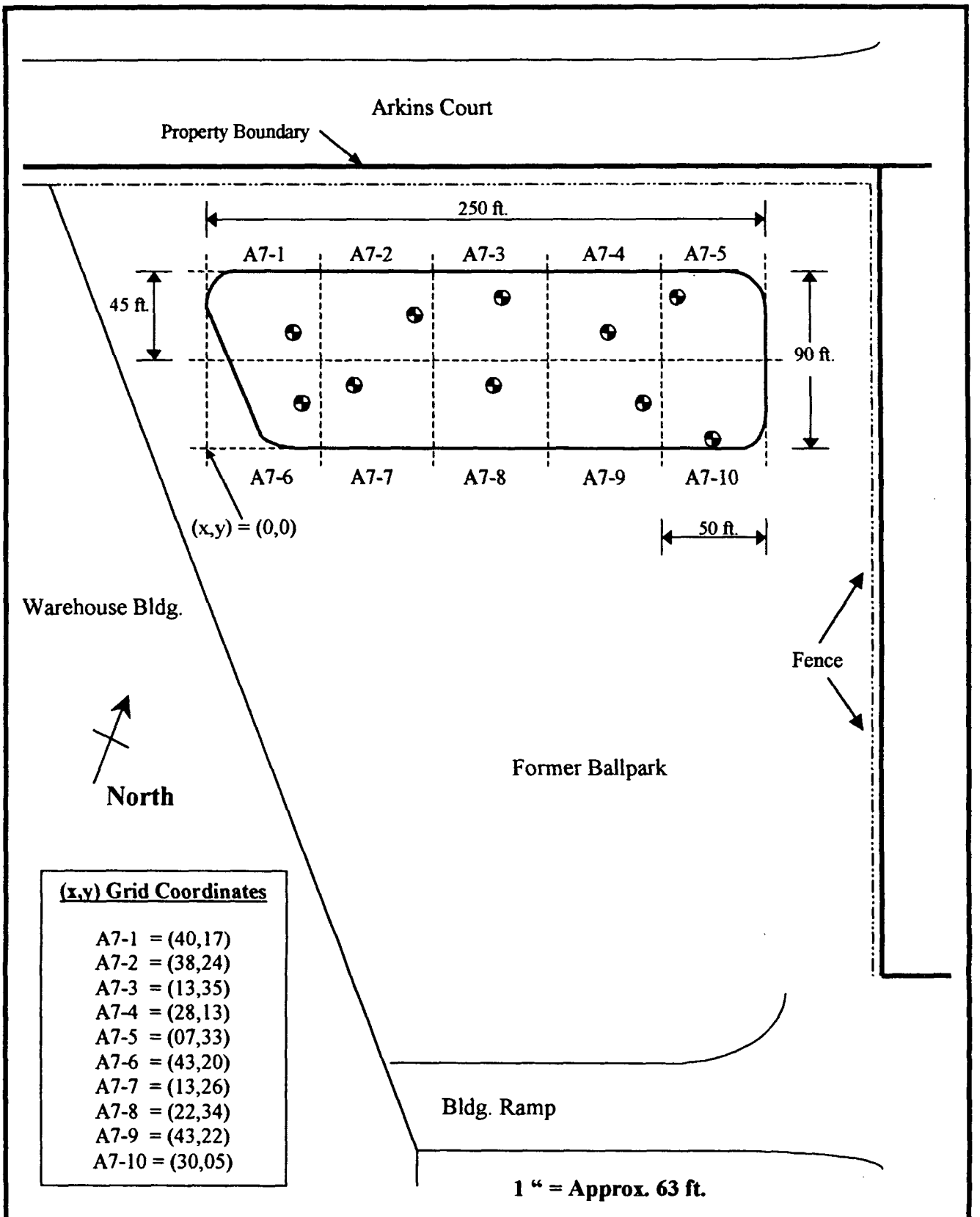
All the SPLP analyses from the 5 deeper borings were non-detect for both lead and arsenic. Table 4 below is provided to summarize information on the depth and location of each sample collected and analyzed by SPLP.

Table 4.
SPLP Pb and As Analytical Results -Area 7

Sample ID	Date Collected	Time Collected	Depth Collected bgs	SPLP Arsenic Results (in mg/Kg)	SPLP Lead Results (in mg/Kg)
A5-5 3-4.5	10/15/01	0820	3'-4.5'	U	U
A7-5 10-15	10/15/01	0840	10'-15'	U	U
A7-5 18.5	10/15/01	0850	18.5'	U	U
A7-10 0-6	10/15/01	0930	0'-6'	U	U
A7-10 9	10/15/01	0940	9'	U	U
A7-10 18	10/15/01	0955	18	U	U
A7-8 0-6	10/15/01	1025	0'-6'	U	U
A7-8 9	10/15/01	1030	9'	U	U
A7-8 19.5	10/15/01	1050	19.5'	U	U
A7-6 0-6	10/15/01	1115	0'-6'	U	U
A7-6 9	10/15/01	1130	9'	U	U
A7-6 18	10/15/01	1145	18'	U	U
A7-1 0-6	10/15/01	1410	0'-6'	U	U
A7-1 9	10/15/01	1450	9'	U	U
A7-1 18	10/15/01	1500	18'	U	U

Note: U = not detected at the reporting limit

The chain-of-custodies and the laboratory reports for these SPLP analyses are included as an attachment to this report.



(x,y) Grid Coordinates

A7-1 = (40,17)
A7-2 = (38,24)
A7-3 = (13,35)
A7-4 = (28,13)
A7-5 = (07,33)
A7-6 = (43,20)
A7-7 = (13,26)
A7-8 = (22,34)
A7-9 = (43,22)
A7-10 = (30,05)

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TRANSPORTATION & INDUSTRIAL SERVICES, INC.

SAMPLE LOCATION MAP
Area 7 – Stormwater Pond
Lead and Arsenic Soil Sampling
Pepsi Bottling Group
3801 Brighton Blvd., Denver, CO 80216

TARGET SHEET

EPA REGION VIII

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